

The number of Americans suffering from asthma has increased dramatically, more than doubling between 1980 and 1996, and children under five years of age have experienced the highest rate of increase. The American Lung Association estimates that 14.6 million Americans suffer from asthma, which is the 7th leading chronic condition in America. The annual direct costs to our nation are almost \$12 billion, with another \$2 billion in indirect costs from premature death, lost workdays, and reduced productivity. The toll of asthma has hit the hardest in the inner cities, and among low income and minority groups. More aggressive treatment is needed so all individuals can enjoy the benefits of asthma control.

Asthma is a condition that requires patients and their caregivers to take personal responsibility for alleviating disease symptoms through lifestyle modifications, environmental changes, and adherence to complex plans of treatment for preventing acute episodes. They must also distinguish dangerous, acute symptoms from less severe episodes of asthma so that timely and appropriate use of professional health care can be obtained. Effective intervention programs that are ethnically, culturally, and age appropriate are therefore critical for improving the quality of life of people with asthma and their caregivers. Such interventions can help save lives.

The NINR research portfolio on pulmonary disorders addresses the symptoms of both childhood and adult asthma in the context of home and clinical settings.

Examples of NINR-Supported Studies

- ❖ Delays in asthma treatment often are due to inaccurate perceptions of symptom severity and these delays contribute to morbidity and mortality. Nurse investigators discovered that nearly half the time parents and children both reported the child to be asymptomatic when he or she actually had moderately reduced pulmonary function. Consequently, they didn't recognize early symptoms, which delayed interventions. Effective use of self-management strategies depends on the capabilities, perceptions and explanatory models that the child and parent have about asthma. An important consideration for future work is evaluating the cost to the child and parent of increased vigilance for perceptual accuracy.
- ❖ Health care professionals agree that most asthma deaths could be prevented through adequate treatment. A key factor related to asthma mortality is that patients delay seeking urgent care. Using face-to-face interviews, nurse investigators examined the reasons asthma patients gave for delaying care. They identified seven reasons. Ninety percent of the sample reported, "underestimating the severity of the attack" and a similar percentage cited, "wanting to avoid disruption of their everyday lives" as reasons for waiting. "Uncertainty about the symptom severity and the appropriate actions to take" was the third most common reason for delay in seeking treatment. Findings suggest that health professionals need to provide clear directions to guide patients' responses to asthma exacerbations. Creating asthma action plans that provide explicit instructions for patients when faced with certain signs and symptoms may be one approach to changing delaying behavior.
- ❖ In clinical practice health professionals use words to describe the experience of breathlessness that are derived from Caucasian groups and these words may not reflect the effect of culture and language on symptom description. NINR-funded investigators compared the words that Caucasians and African Americans with asthma used to describe the sensations and/or symptoms experienced during an induced asthma attack. For each group the researchers identified five distinct descriptors of the asthma experience. For African Americans, the phrases were "tight throat," "scared/agitated," "voice tight," "itchy throat" and "tough breath." Caucasians spoke of a "need to take a deep breath," feeling

“lightheaded,” being “out of air,” being “aware of breathing” and feeling that it “hurts to breathe.” Educating health professionals about the unique ethnic language of breathlessness may prevent the undertreatment of asthmatic

African Americans during acute asthma episodes.

NATIONAL INSTITUTE OF NURSING RESEARCH

The National Institute of Nursing Research (NINR) supports clinical and basic research to establish a scientific basis for the care of individuals across the life span – from management of patients during illness and recovery to the reduction of risks for disease and disability and the promotion of healthy lifestyles. According to its broad mandate, the Institute seeks to understand and ease the symptoms of acute and chronic illness; prevent or delay the onset of disease or disability or slow its progression; find effective approaches to achieving and sustaining good health; and improve the clinical settings in which care is provided. The NINR’s research extends to problems encountered by patients’ families and caregivers. It also emphasizes the special needs of at-risk and underserved populations. These efforts are crucial in translating scientific advances into cost-effective health care that does not compromise quality.

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